



Non-segregated phase bus duct offers a full range of products to meet many diverse applications

BCP non-segregated phase bus duct has been designed to meet specific installation requirements for reliable power distribution. Typical of such applications are the connections from transformers to switchgear assemblies in unit substations, connections from switchgear assemblies to generators, and tie connections between switchgear assemblies. Non-segregated phase bus duct is an assembly of bus conductors with associated connections, joints and insulating supports confined within a metal enclosure without inter-phase barriers. Because of its compact dimensions, relative light weight and user-friendly design, non-segregated phase bus duct is easy to install.

Product features and benefits

- Standard 3 mm aluminium enclosure provides durability and product integrity, Special Enclosure thickness and materials are available upon request
- 98% conductivity copper with all joint surfaces silver or tin plated to ensure maximum conductivity through the joint
- Product design and manufacturing meets requirements of international standard IEC or ANSI Standard
- A full family of fittings and accessories to meet any application requirements
- High one second short-circuit ratings optimize coordination between bus duct and power equipment
- Easy installation allows for a lower cost installation in comparison to power cable

Bus duct capabilities

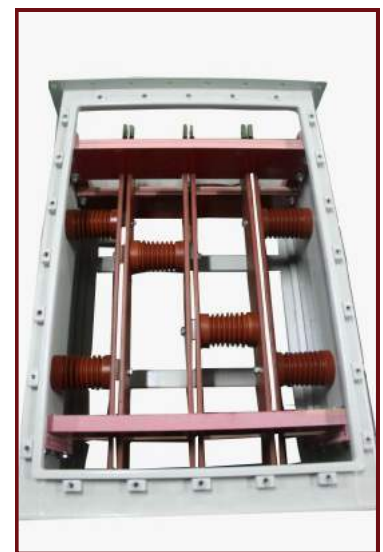
- The non segregated phase bus duct manufacturing facility in Cikarang West Java
- Customer approval drawings can be available in two weeks or less to meet your project requirements
- BCP,s Final Field Fit program ensures accurate layout and allows for minor last minute modifications during Installation
- Advanced system tools, including AutoCAD & Vertex, provide quick and accurate information as well as help meet your custom requirements.

Product support

Non-segregated phase bus duct product and application support is available from a professional team of BCP employees that includes field sales engineers, application engineers, engineering services and product engineers.

Local Content

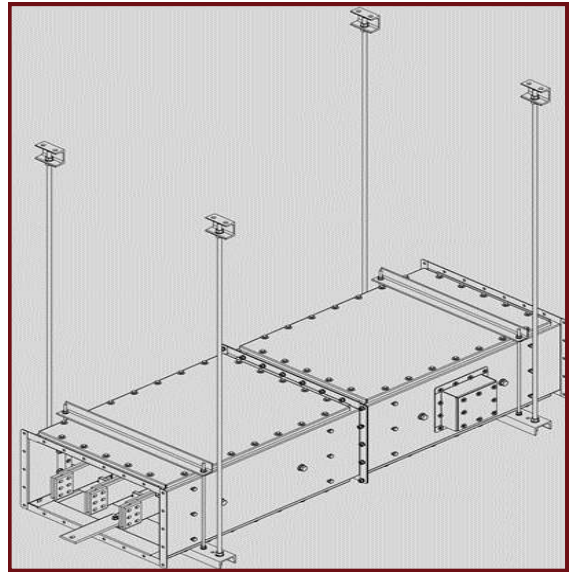
For support government regulations to meet local content requirements, it has been certified by Sucofindo.



Lightweight enclosures with built-in features for easy installation

Housing design

Enclosures are fabricated from 3mm aluminium as standard. Special Enclosure thickness and materials are available upon request. Enclosures are welded for maximum rigidity. Removable covers are secured with bolts for ease of access when making joints and subsequent periodic inspections. Enclosures are painted with a powder coat paint system resulting in a very durable finish with uniform thickness and gloss. This cosmetically pleasing finish minimizes the risk of problems in harsh environments. The standard color is RAL 7032. Special paint colors are available upon request. The adjustable angle, collar, and busbars are slotted to allow movement. Adjustment available on horizontal joints only. Enclosures for outdoor applications are supplied with a rubber & polyurethane gasket. The gasket is applied under the



Housing Assembly



IP 65 Certified



Product assembly

High short-circuit and withstand ratings

Bar design

All conductors are 98% conductivity copper bars. For 400 ~ 690V insulated with PVC heatshrink is standard, the option is used rubber heatshrink. 1kV and above insulated with polymer heatshrink. The insulators are adequately track-resistant, flame-retardant

polyester supports. Bus joints are made by solidly bolting busbars together with splice plates on each side. All joint surfaces are silver-plated as standard to ensure maximum conductivity through the joint. Tin-plating is available upon request.

After bolting, each standard joint is covered by a preformed, flame-retardant insulating boot, providing full insulation for bus conductors. These boots are easily removable for inspection of the joints at any future time.

Product Arrangement

Rated Maximum Voltage (kV)	Rated Power Frequency (Hz)	Power Frequency Withstand 1 min. kV rms	Impulse withstand (1.2 x 50 ms) kV peak	Rated Continuous current Amperes	Rated short time short circuit withstand current (kA rms Symmetrical)	Rated momentary short circuit withstand current (10 cycle)					
						kA peak	kA rms Assymmetrical				
0.690	50/60	2.2	10	1250	40	104	49				
				2000	50	130	59				
				3200	63	164	80				
				4000	85	164	80				
				5000	100	220	105				
				6300	150	330	105				
7.2	50/60	20	60	1250	40	104	49				
				2000	50	130	59				
				3200	63	164	80				
				4000							
				5000							
				6300							
12	50/60	28	75	1250	40	104	49				
				2000	50	130	59				
				3200	63	164	80				
				4000							
				5000							
				6300							
17.5	50/60	38	95	1250	40	104	49				
				2000	50	130	59				
				3200	63	164	80				
				4000							
				24	50/60	50	125	1250	31.5	82	51
								2000	40	105	51
				3200							

Standard Applicable

- IEC 62271-200
- ANSI C37.23

Type Test

- Short time current withstand test
- Temperature rise test
- Impulse Test
- IP 65 Test

Routine Test

- Dry power frequency voltage withstand test
- Insulation resistance test
- Continuity of auxiliary wiring
- Paint coating thickness measurement
- Torque test

A complete line of accessories for indoor and outdoor applications

Accessories

Flange

Connects non-segregated phase bus to medium voltage switchgear, medium voltage motor control centers, low voltage switchgear, low voltage switchboards, and low voltage motor control centers , etc.

Phase transposition

Can be provided within the bus run system to align phasing of terminal equipment at two ends.

Elbow

Used to turn the bus run by 90°

Tee

Used for three-directional connections

Offset

Used to avoid obstacles

Wall flange

Provided when a bus run passes through a wall or floor

Transformer or Generator throat

Used when making connections to transformers or generator includes a matching flange and required number of flexible copper braids for connections to transformer bushing terminal pads

Cable tap box

Used for cable connections to the bus run

Bushing box

Used to connect bus duct to an outside source such as a power station or cable connection located outdoors

Horizontal hanger

Provided on indoor runs and attached to the existing building structure through the use of 5/8-inch diameter drop rods.

Column support

Used to support outdoor runs; normally consists of a single structural column with a crossbeam, which is bolted to brackets provided on the bus housing (BCP provides the brackets only).

Space heater

Provided on indoor and outdoor bus runs for use with customer supplied 120 Vac or 240 Vac power supply; energized continuously, or optional thermostat control available.

Thermostats

For control of space heaters, adjustable thermostat to provide continuous heat, and adjustable for controlled heat up to 60°C.

Vapor barriers

Provided as specified to prevent moisture and air from passing through the bus duct.

Fire barriers

Come with vapor barriers and use fire-stop foam to provide 1-, 2- or 3-hour fire barrier



Test IP



Insulation test



Paint Thickness Check



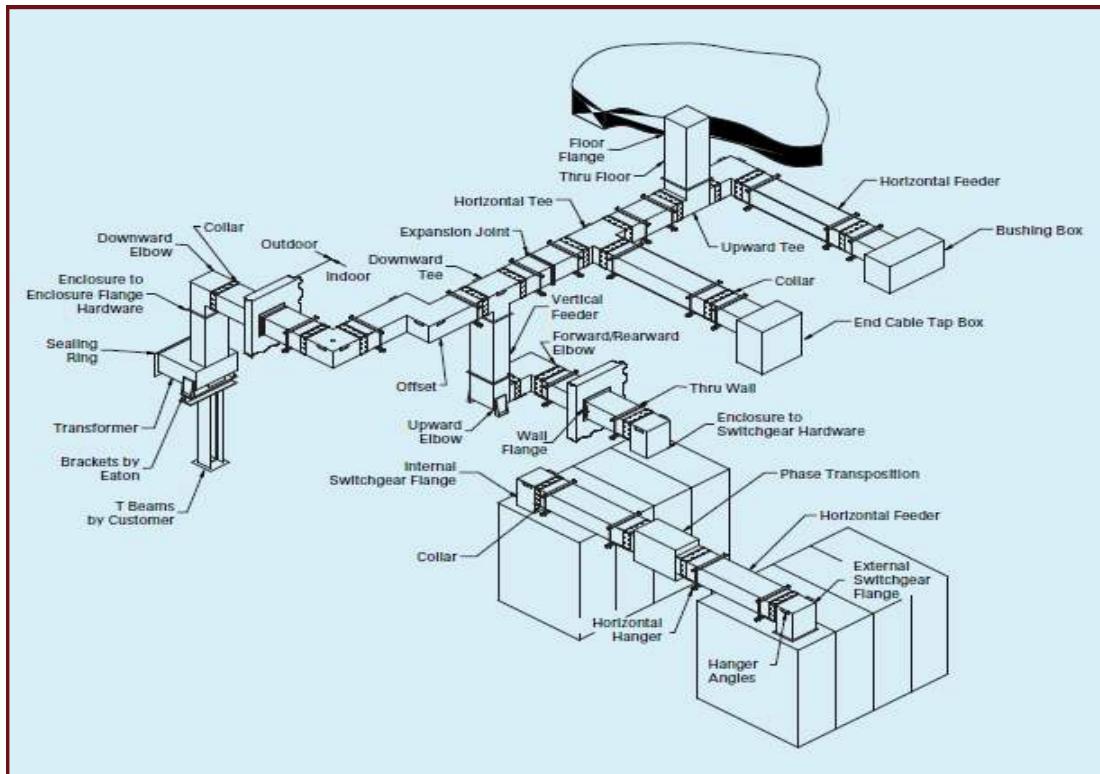
Torque Test



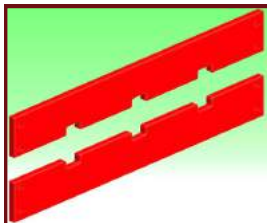
Test IP

Non Segregated Phase Busduct CP-NSPB

Configurable in multiple combinations to complete any system
Engineered-to-order and custom-built to meet customer-driven solutions



Standard Accesories



HGW Insulator



Flexible Bar



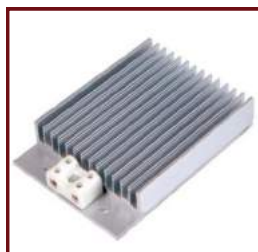
Heat-shrinkable



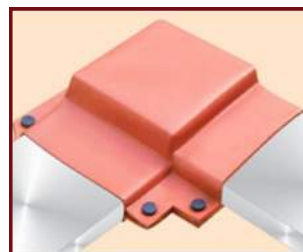
MV Insulator



LV Insulator



Heater



Bus Boot



Busbar Elbow



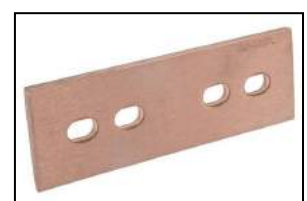
Busbar Support



Busbar Joint



Busbar Elbow



Busbar Straight

Tin Plating Facility



Tin plating is a metal coating technique with a thin layer of tin. This process involves electrochemistry where tin metal is deposited on the surface of the workpiece. Tin plating has many advantages, including improved corrosion resistance, electrical conductivity, and weldability. Tin plating is used in a variety of applications across a variety of industries, including electronics, automotive, jewelry, and household appliances. In modern industry, tin plating is very important to improve product performance and durability.

Powder Coating Facility



Powder coating is a painting system that does not use liquid materials or thinners as is usually done when conventional painting. This painting system is usually used to coat metal, whether iron or aluminum.

Once the object has been heated and the paint layer has hardened, the end result is a surface that is corrosion resistant, scratch resistant, and has a smooth and attractive appearance. The main advantages of powder coating are high durability and a professional final appearance.

Gasket Sealing Facility



Gaskets are one of the important components in engine circuits, which are useful as seals in engine blocks that are assembled together. The purpose of using this component is to prevent leaks, both in compression, oil burning gas and air conditioning.

Rubber gaskets prevent dust or other contaminants from entering the inside of the engine, thereby extending engine life, keeping engine performance stable, and working faster and more efficiently.

Laser Facility



A laser cutting machine is a machine that functions to carry out the process of cutting raw materials with different thicknesses using laser beam technology which is focused at a point. A laser cutting machine is a machine that functions to carry out the process of cutting raw materials with different thicknesses using laser beam technology which is focused at a point.

Non Segregated Phase Busduct CP-NSPB

Type Test Certificate by Qualis



NSPB 12kV, 2500A, 50kA, 50Hz, IP 65



NSPB 12kV, 3200A, 50kA, 50Hz, IP 65



NSPB 15kV, 1250A, 50kA, 50Hz, IP 65



NSPB 0.69kV, 3200A, 40kA, 50Hz, IP 65

Local Content Certificate by Ministry of Industry



MV NSPB



LV NSPB

Success Story

NO	Project Name	Customer	Market Application
1	CPP Gundih, Cepu	PT. Pertamina EP	Oil & Gas
2	Terminal LPG Tanjung Sekong	PT. WIKA	Oil & Gas
3	New Effluent Water Treatment Plant (EWTP)	PT. Recon Sarana Utama	Oil & Gas
4	Lombok GECC Power	PT. PP	Power Plant
5	PLTMG Package 5	PT. Bagus Karya	Power Plant
6	PT. Pupuk Kudjang	PT. Recon Sarana Utama	Industrial
7	Lombok—CFSP-2	PT. Reayasa Industri	Power Plant
8	PALU-3 CFSP 2x50 MW	PT. Wika	Power Plant
9	Pertamina RU II Dumai	PT. Indokomas Buana Perkasa	Oil & Gas
10	Proyek Pembangunan Gudang Bahan Baku	PT. Nindya Karya	Industrial